UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105
http://www.epa.gov/region9/waste/enforcement/index.html

Purpose:	RCRA Compliance Evaluation Inspection
Facility:	Semiray Special Processes
Location Address:	3027 E. Washington St. Phoenix, AZ 85034
RCRA ID Number:	AZD981636129
Date of Inspection: **Time In/Time Out**	October 30, 2014 11:40 AM – 2:00 PM
U.S. EPA Representative:	Rick Sakow, EPA Region 9 (Lead Inspector) RCRA and Clean Water Act Inspector and Enforcement Officer (415) 972-3495 sakow.rick@epa.gov Aisha Kennedy, EPA Region 9 (Second Inspector) RCRA Inspector and Enforcement Officer (415) 972-3301 kennedy.aisha@epa.gov
Facility Representative:	Chris Rademaker Chemline Manager (602) 275-1917 crademaker@semirayinc.com
Report Date:	February 6, 2015
Report Prepared by:	Rick Sakow 2/6/2015 Rick Sakow

A. Introduction

On October 30, 2014, representatives of the U.S. Environmental Protection Agency, Region 9 (EPA) conducted an unannounced hazardous waste management compliance evaluation inspection (CEI) of Semiray, Inc, located in Phoenix, Arizona. The purpose of the inspection was to determine Semiray's compliance with applicable federal environmental statutes and regulations, and in particular, the Resource Conservation and Recovery Act (RCRA), as amended, the regulations provided in the Code of Federal Regulations (CFR), Chapter 40, Parts 261-265, 268, 273, and 279, and Arizona's hazardous waste regulations.

B. Facility Background

Company Web-Site	http://www.semirayinc.com
Site History	Semiray, Inc. assumed operations of this facility in October 2004, after acquiring the assets from Kachina Technical Services and Processes, which had formerly operated the facility. According to Reference USA, this establishment has been in operation since 1980.
Number of Employees	According to Mr. Rademaker, the company has roughly 50 employees and does not employ contractors.
Hours of Operation	6:00 AM to 11:00 PM (split into two shifts) Monday – Friday
Latitude/Longitude	33°26'51.58" N 112°00'57.23" (as measured on Google Earth Pro on 11/14/2014)
Facility Operations	Semiray's website listed on 11/7/2014 the following industrial services: Aluminum anodizing (chromic and sulfuric anodize), chemical conversion coating, cleaning and passivation, pre-penetrant etch (aluminum and steel), non-destructive testing (mag particle and fluorescent dye penetrant), solvent cleaning, paint and rubber application. The anodizing / metal plating lines are situated on grates which set on top of concrete drainage ways. The drainage ways collect and discharge metal plating and anodizing wastes to the facility's wastewater treatment unit.

RCRA and Non-RCRA Hazardous Wastes Streams

Semiray's hazardous waste streams include the following:

Hazardous Waste Stream	Hazardous Waste ID
wastewater treatment sludge / filter cake	F006, D007
used paint	D001, D007, D033, F003, F005
used paint filters	D007
waste paint related material	F003, F005, D001, D018, D035, D039
used solvents (Acetone, Isopropanal and Methyl ethyl ketone)	D001, D035, F003, F005.
waste chromic acid solution	D002, D007

During the 10/30/2014 CEI, Semiray had accumulated quantities of hazardous waste generated on the same date which exceeded 1,000 Kg or 2,200 Lbs, including:

4 55-gallon containers of chromic acid waste, dated 5/28/2013,
4 55-gallon containers of chrome waste, dated 11/14/2013.

EPA calculated the weight for these two hazardous waste generation events by using EPA's Gallons-Pounds Conversion tool, available at www.epa.gov/p2/pubs/resources/GallonsPoundsConversion.xls. The density of chromic acid (typically hexavalent chromium) is listed as 1201 kg/m3, or 10.00 lbs per gallon, multiplied by 220 gallons (4 55-gallon containers) which yields 2,200.17 lbs. Therefore, EPA inspected this facility under RCRA requirements for Large Quantity Generators (facilities which generate more than 1,000 Kg or 2,200 Lbs of hazardous waste in a month.)

Inspectors made copies of Semiray's manifests from 2011 – 2014 while at the facility and also obtained copies from Stericycle of shipments collected from Semiray in the last five years. Both Semiray's and Stericycle's manifests are included in Attachment 2.

Manifests reviewed at the facility documents that Semiray uses two hazardous waste transporters to transport offsite the above listed waste:

- Stericycle Specialty Waste Solutions, Inc., EPA ID No. MNS0000110924, and
- Safety-Kleen Systems, EPA ID No. TXR000081205.

The following data summarizes the total weight listed in Semiray's manifests:

April 2009:	4,000 Lbs,
June 2009:	1,620 Lbs
February 2011:	5,950 Lbs,
April 2011:	5,464 Lbs,
June 2011:	2,070 Lbs,
November 2011:	2,200 Lbs,
December 2011:	5,917 Lbs,
May 2012:	Unspecified amount, "3 cubic yard Super-Sacks of Chrome sludge" (no weight listed) in addition to 4,500 Lbs,
November 2012:	2,520 Lbs,
February 2013:	3,120 Lbs,
July 2013:	5,100 Lbs,
December 2013:	3,900 Lbs,
June 2014:	5,800 Lbs,
October 2014:	Unspecified amount ("1 Drum") plus 50 Lbs.
November 2014:	7,050 Lbs

At the time of the inspection, Semiray was listed in RCRAinfo as a Conditionally Exempt Small Quantity Generator (CESQG). The RCRA Site Detail Report for Semiray (Attachment 3) provides more detail on Kachina and Semiray's generator status and reporting history and is summarized below:

Reporting years	**Generator Status**
1989 – 2004	Large Quantity Generator
2005	Conditionally Exempt Small Quantity Generator
2007	Small Quantity Generator
2008	Conditionally Exempt Small Quantity Generator
2009 – 2014	No Reporting info in RCRAinfo.

Compliance History	ADEQ conducted a CEI on February 1, 2010 and issued Semiray a Notice of Violation on April 26, 2010, citing the following violations: • Storage of hazardous waste exceeding 180 days, • Failure to label hazardous waste containers, • Failure to keep hazardous waste containers closed, • Failure to have hazardous waste at or near the point of generation, • Failure to have emergency information posted next to the phone, • Failure to train employees of proper hazardous waste handling and emergency procedures, • Failure to make hazardous waste determinations, • Failure to pay annual generation fees, • Universal waste violations, and • Treating, storing or disposing of hazardous waste without a permit. ADEQ conducted a second CEI on April 19, 2011 and issued Semiray a Notice of Violation on June 22, 2011, citing the following violations: • Storage of hazardous waste exceeding 180 days, • Failure to pay annual generation fees. On 11/16/2012, the City of Phoenix Environmental Services Division issued a Notice of Violation to Semiray for using its secondary containment system as a holding tank. The City's inspection reports also noted effluent discharge exceedances for chromium on 4/26/2011 (8.74 mg/L discharged, 2.77 mg/L limit).
SIC/NAICS Codes	SIC: 3812 Aerospace Industries (as shown on ReferenceUSA), SIC: 8734 Semiconductor X-Ray (as shown on Dunn & Bradstreet)

Below is an aerial photograph of the Semiray facility as taken from Google Earth Pro with an aerial dated March 2014. A site map of the facility has been included as Attachment 4.

C. On-Site Inspection

The on-site inspection portion of the CEI began at Semiray's upstairs conference room, where inspectors held an opening conference with Mr. Rademaker at approximately 11:45 AM. The group then visited the facility's hazardous waste accumulation area, (HWAA) then the wastewater treatment unit and then visited the indoor metal plating and anodizing lines. Lastly, inspectors visited a satellite accumulation area inside the main building as well as a small, indoor laboratory. Inspectors held a close-out conference with Mr. Rademaker at approximately 1:30 PM. Following the inspection, EPA issued a Request for Information Semiray on November 13, 2014. Information from Semiray's response has been incorporated into this report.

1. Facility and Satellite Accumulation Areas

The Semiray facility covers approximately 1.4 acres, as measured by Google Earth Pro. The HWAA is located in the southeast corner of the facility in an L-shaped, gated and roofed structure. Hazardous wastes were also accumulated in Semiray's on-site wastewater treatment unit's secondary containment system and within the floor drains located inside the building at the time of the inspection. Inspectors noted two satellite accumulation areas for hazardous waste,

including: (1) small containers used by employees to hold waste thinner and (2) a 5-gallon bucket of waste acetone used for titrations in the chemical laboratory.

The following table summarizes the observations made during the on-site inspection portion of the CEI for all SAAs visited during the inspection.

All photos in this report were taken by Rick Sakow of US EPA Region 9.

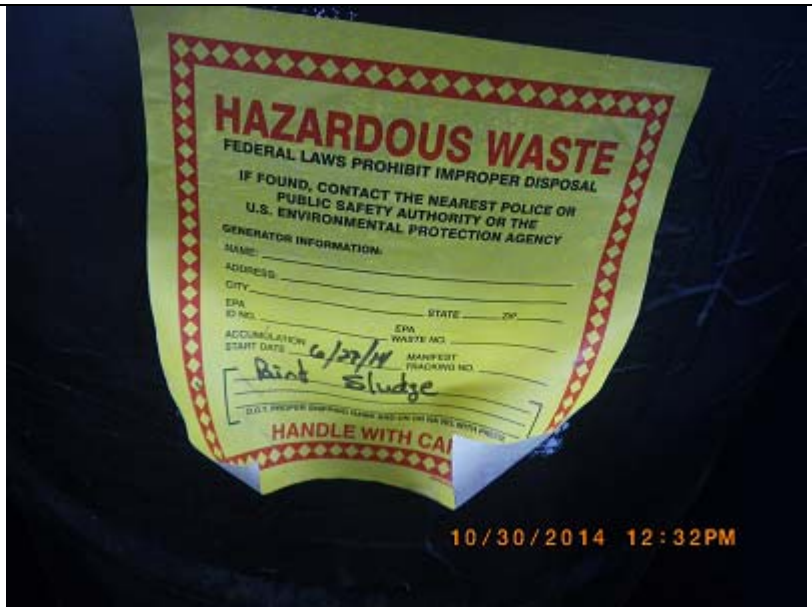
Observation	Photograph
1. *Containers used to hold waste thinner (D001) located at the indoor anodizing and masking area. The containers were not labeled.*	 No. 1 (IMGP3945)
2. *Waste acetone (D001; F003) used in the chemical lab for titrations. The container was not labeled as a satellite accumulation container and was not properly closed. EPA inspector Sakow lifted the aluminum foil to show the contents before taking the photo. The container had roughly an inch of acetone at the bottom.*	 No. 2 (IMGP3947)

2. Less than 90-day Hazardous Waste Accumulation Area (HWAA)

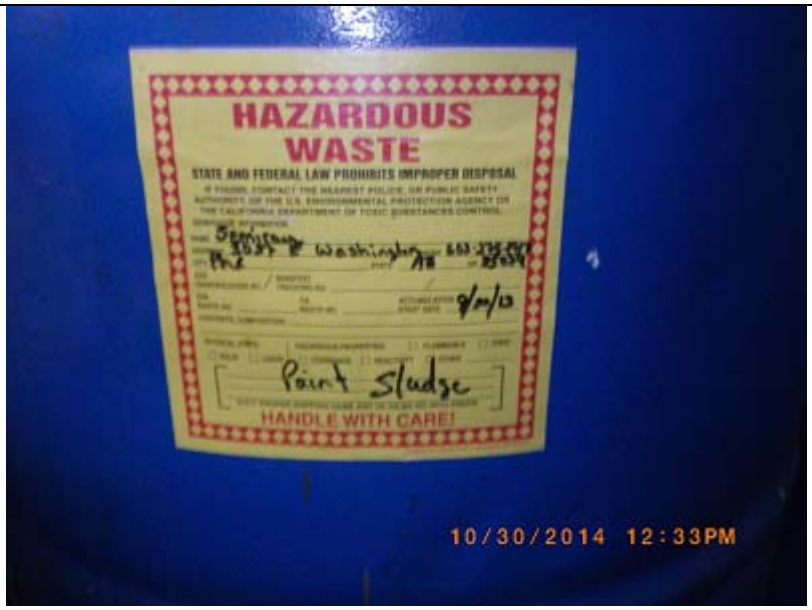
Semiray's HWAA is located at the southern portion of the facility in an L-shaped, roofed and locked building.

Observation	Photograph

Observation	Photograph
1. *Mr. Rademaker stated that the containers on the left in this photo are hazardous wastes and the containers on the right side are product. The hazardous waste labels for the 9 containers on the left side read "Flammable Liquids" and "Paint Sludge."* *Based off of Semiray's recent manifests, the flammable liquids are likely acetone and methyl ethyl ketone (D001 and/or D035, F003 and F005.)* *The paint sludge is likely D001 and/or D007, D018, D035, D039, F003 and F005.* *Note that the red funnel on the black container on the left side is not latched shut and does not have adequate gaskets to prevent releases of solvent fumes.*	 No. 1 (IMGP3859)

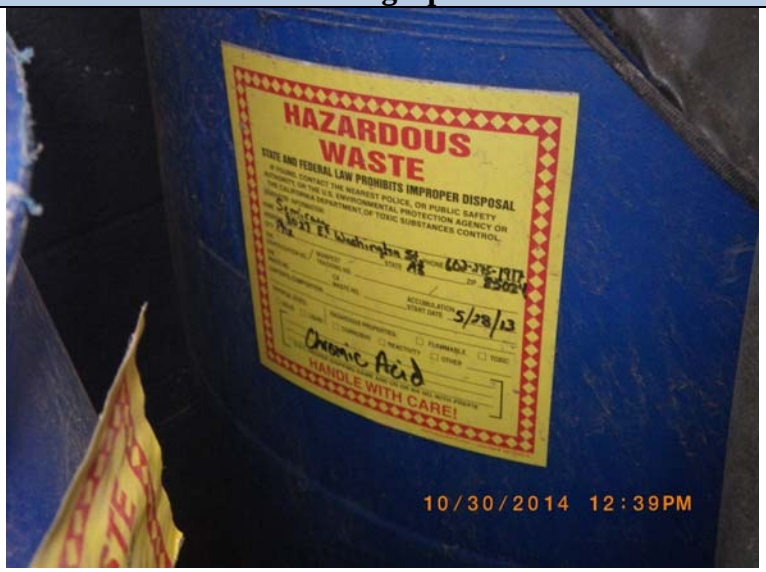
Observation	Photograph
2. *Hazardous waste label affixed to a 55-gallon container, labeled "Flammable Liquids" with an accumulation start date of 6/27/2014 (accumulated for 125 days, 35 days beyond 90 days at the time of the inspection.)* *Based off of Semiray's recent manifests, the flammable liquids are likely acetone and methyl ethyl ketone (D001 and/or D035, F003 and F005.)*	 No. 2 (IMGP3862)
3. *Hazardous waste label affixed to a 55-gallon container, labeled "Paint Sludge" with an accumulation start date of 6/27/2014 (accumulated for 125 days, 35 days beyond 90 days at the time of the inspection.)* *Based off of Semiray's recent manifests, the paint sludge is likely D001 and/or D007, D018, D035, D039, F003 and F005.*	 No. 3 (IMGP3863)

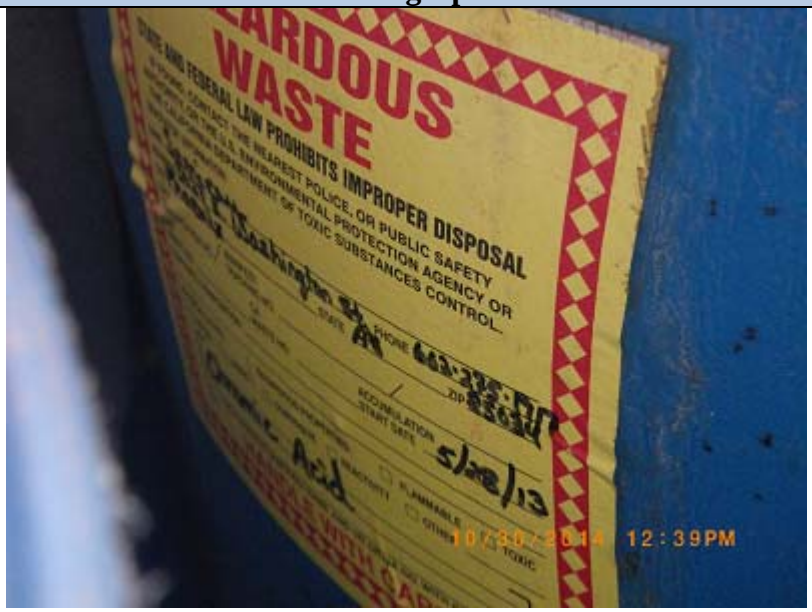
Observation	Photograph
4. *The three containers in the foreground of this photo were unlabeled. Mr. Rademaker stated that they are flammable liquids (likely IPA or acetone and methyl ethyl ketone.)* *Based off of Semiray's previous manifests, the flammable liquids are likely acetone and methyl ethyl ketone (D001 and/or D035, F003 and F005.)* *Note that the containers are unlabeled and there is no aisle space to inspect the containers. .*	 No. 4 (IMGP3864)

Observation	Photograph
5. *Partially legible hazardous waste label on a container in the HWAA labeled "Satellite Container." Inspectors observed satellite containers used at the facility to collect waste thinner and isopropyl alcohol (D001). The accumulation start date on this label is illegible but appears to be 6/3/2013.*	 No. 5 (IMGP3865)
6. *Hazardous waste label on a container shown in IMGP3859 for "Paint Sludge" with an accumulation start date of 9/20/2013 (accumulated for 405 days, 315 days beyond 90 days at the time of the inspection.)* *Based off of Semiray's previous manifests, paint sludge is likely D001 and/or D007, D018, D035, D039, F003 and F005.*	 No. 6 (IMGP3866)

Observation	Photograph
7. *Hazardous waste label on a container shown in IMGP3859 for "Liquid Polymer" without an accumulation start date.* *EPA could not determine an appropriate*	 No. 7 (IMGP3867)
8. *Overview photo of metal plating and chrome waste containers in the HWAA.* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.* *Note that the container with the black mark in the center / background in this photo does not have a label.*	 No. 8 (IMGP3869)

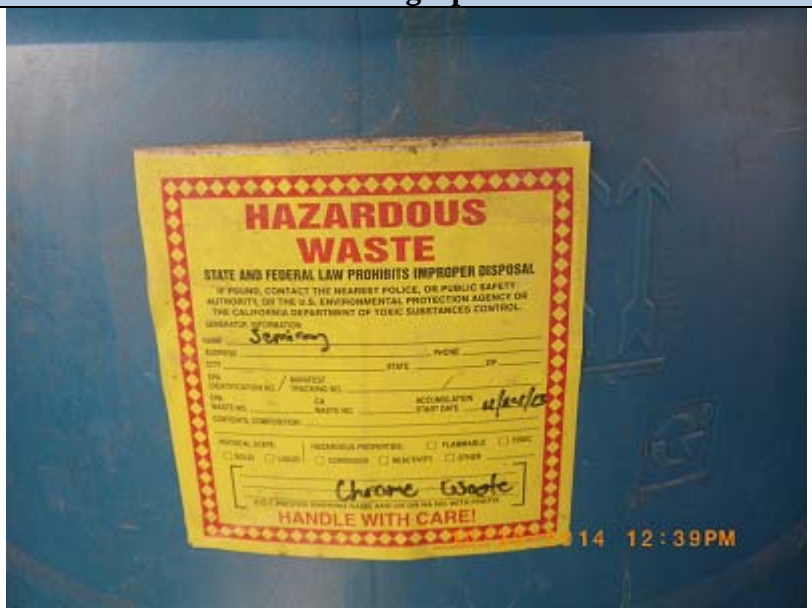
Observation	Photograph
9. *Close up of one of the containers shown in IMGP3869. Note the label had folded onto itself and was peeling from the container.*	 No. 9 (IMGP3871)
10. *Close up of the label shown in IMGP3871. The label describes the contents as "Chrome" with an accumulation start date of 1/24/2014 (accumulated for 279 days, 189 days beyond 90 days at the time of the inspection.* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.*	 No. 10 (IMGP3872)

Observation	Photograph
11. *Close up of the label shown in IMGP3869. The label describes the contents as "Chromic Acid" with an accumulation start date of 5/28/2013 (accumulated for 520 days, 430 days beyond 90 days at the time of the inspection.)* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.*	 No. 11 (IMGP3873)
12. *Close up of chromic acid waste. Close up of the container labels are shown in the following photos.* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.* *Note the lack of aisle space.*	 No. 12 (IMGP3874)

Observation	Photograph
13. *Close up of a label affixed to a 55-gallon container, labeled "Chromic Acid" with an accumulation start date of 5/28/2013 (accumulated for 520 days, 430 days beyond 90 days at the time of the inspection.)* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.* *This is a separate container than the one shown in IMGP3873, which has identical contents and accumulation start date.*	 No. 13 (IMGP3875)

Observation	Photograph
14. *Close up of a label affixed to a 55-gallon container, labeled "Chromic Acid" with an accumulation start date of 5/28/2013 (accumulated for 520 days, 430 days beyond 90 days at the time of the inspection.)* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.* *This is a separate container than the one shown in IMGP3873 and IMGP3875, which have identical contents and accumulation start dates.*	 No. 14 (IMGP3876)

Observation	Photograph
15. *Close up of a label affixed to a 55-gallon container, labeled "Chromic Acid" with an accumulation start date of 5/28/2013 (accumulated for 520 days, 430 days beyond 90 days at the time of the inspection.)* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.* *This is a separate container than the one shown in IMGP3873, IMGP3875 and IMGP3876, which have identical contents and accumulation start dates.*	 No. 15 (IMGP3877)

Observation	Photograph
16. Close up of a label affixed to a 55-gallon container, labeled "Chrome Waste" (D007) with an accumulation start date of 11/14/2013 (accumulated for 350 days, 260 days beyond 90 days at the time of the inspection. *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.*	 No. 16 (IMGP3878)

Observation	Photograph
17. Close up of a label on an additional container shown in IMGP3869. The label describes the contents as "Chrome Waste" with an accumulation start date of 11/14/2013 (accumulated for 350 days, 260 days beyond 90 days at the time of the inspection.) *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.* *This is a separate container than the one shown in IMGP3878, which has identical contents and accumulation start dates*	 No. 17 (IMGP3879)

Observation	Photograph
18. *Close up of a label on an additional container shown in IMGP3869. The label describes the contents as "Chrome Waste" with an accumulation start date of 11/14/2013 (accumulated for 350 days, 260 days beyond 90 days at the time of the inspection.).* *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.* *This is a separate container than the one shown in IMGP3878 and IMGP3879, which have identical contents and accumulation start dates.*	 No. 18 (IMGP3880)

Observation	Photograph
19. Label falling off of one of the containers shown in IMGP3869. Note that this is a different container than IMGP3871, which also had a label peeling off.	 No. 19 (IMGP3881)
20. Label on container shown in IMGP3881. The label describes the contents as "Chrome Waste" with an accumulation start date of 11/14/2013 (accumulated for 350 days, 260 days beyond 90 days at the time of the inspection.) *Based off of Semiray's previous manifests, the chrome waste is likely D002 and/or D007 and F006.*	 No. 20 (IMGP3882)

Observation	Photograph
21. *Floor drainage system in the HWAA. Mr. Rademaker explained that this drainage system empties into a retention basin shown in IMGP3886.* *Note the unlatched funnel (open container) on container on the right of the photo, which had a hazardous waste sticker labeled "10/30/2014 Flammable Liquids".* *Based off of Semiray's recent manifests, the flammable liquids are likely Acetone and Methyl ethyl ketone (D001 and/or D035, F003 and F005.)*	 No. 21 (IMGP3883)

Observation	Photograph
22. View of drainage sump in the HWAA with accumulated liquids. Mr. Rademaker stated during the inspection that the drainages in the HWAA (shown in IMGP3883) discharge to this sump. Mr. Rademaker was not sure of the composition of this liquid nor how long it had been there during the time of the inspection. This sump is listed on Semiray's facility site map (Attachment 4) as an "Internal Facility Feature" connected to a trough. EPA could not determine if the drainage sump connected to the wastewater treatment unit. *ADEQ's 2/1/20110 inspection report (Attachment 5) states that "The Sump is approximately 4-5 feet deep and holds approximately 300-gallons. The sump was filled to approximately 6-inches from the top."*	 No. 22 (IMGP3886)

Observation	Photograph
23. Super-Sack of filter cake sludge (F006) from the facility's on-site wastewater treatment unit, accumulated in the HWAA. Note that the container is not marked or dated and is not closed.	 No. 23 (IMGP3887)
24. White container with unknown contents. *EPA did not take a photo of the face-side of the peeling label at the time of the inspection due to time constraints.*	 No. 24 (IMGP3891)

Observation	Photograph
25. Black plastic garbage bags containing paint booth filters, which Mr. Rademaker stated are hazardous for chrome (D007). The black garbage bags are not adequate containers and these hazardous wastes are not being managed to prevent release to the environment or to protect worker safety. Note that there are no labels with hazardous waste accumulation start dates. .	 No. 25 (IMGP3892)

Observation	Photograph
26. Photo of the bags of air filters shown in IMGP3892. The two additional boxes behind the bags contain additional bags of waste air filters, which are hazardous for chrome, according to Mr. Rademaker. The boxes and bags were not labeled, dated and were not adequately closed.	 No. 26 (IMGP3894)
27. Close up of the paint booth filters shown in IMGP3892. Note that Mr. Rademaker opened the bag during the inspection to show the contents.	 No. 27 (IMGP3895)

Observation	Photograph
28. Contents of the container shown in IMGP3896 showing what appear to be contaminated rags and personal protective equipment. During a 11/19/2014 phone call with EPA inspector Rick Sakow on 11/19/2014, Mr. Rademaker stated that the label shown on this container was torn off and only a portion of the label remained on the container. *In their 12/11/2014 response to EPA's information request, Semiray reported that these waste used wipes are hazardous for methyl ethyl ketone (D035, F005), chromium (D007), acetone (F003), n-butyl acetate, toluene (F005) and xylene (F003).*	 No. 28 (IMGP3898)

3. Wastewater Treatment Unit

The following table summarizes the observations made during the walk-through portion of the facility's wastewater treatment unit. As shown in the photographs below, EPA inspectors observed liquid metal plating / anodizing waste and hazardous filter cake solids accumulated in the wastewater treatment unit's secondary containment berm. The concrete berm showed deterioration and cracks. One of the cracks had split through the entire length of the concrete,

creating a potential discharge point for chrome waste to discharge into the adjacent property at the southern border of the facility (see photograph IMGP3907.)

EPA did not collect a sample of the liquid in the berm at the time of the inspection. Based off of Semiray's previous manifests, the accumulated plating waste is likely D002 and/or D007 and F006.

Semiray provided the following information regarding the wastewater treatment unit in their 12/11/2014 response to EPA's information request:

1. Semiray operates an on-site wastewater treatment system to pretreat metal plating and other wastes, under coverage of a City of Phoenix Class A Wastewater Discharge Permit, No. 0910-22055. The lift pump which delivers metal plating waste into the treating tanks of the wastewater treatment unit had malfunctioned on October 30, 2014. The pump was operating at about 30-40% at the time of the inspection. All metal plating rinse water overflows were shut off and the main valves were closed to prevent more accumulated rinse water to be sent out to the holding tank of the wastewater treatment unit. A new pump was installed on November 3, 2014 (four days after the inspection).
2. On 11/16/2012, the City of Phoenix issued a Notice of Violation to Semiray for using its secondary containment system as a holding tank. The City's inspection reports also noted effluent discharge exceedances for chromium on 4/26/2011 (8.74 milligrams per liter (mg/L) discharged, 2.77 mg/L chromium effluent limit). During the opening conference of the inspection, Mr. Rademaker explained that Semiray uses both trivalent and hexavalent chrome in its processes.
3. Semiray could not locate records to determine when the secondary containment system was last coated with a sealant or when the containment system had last been evaluated for cracks or gaps.

During a 1/9/2015 phone call with inspector Sakow, Mr. Rademaker provided more information about the treatment systems' holding tanks. Metal plating waste is gravity fed into four 1,000 gallon polypropylene tanks located beneath the wastewater treatment unit. Mr. Rademaker was uncertain if these tanks have ever been tested or certified for leaks and stated that the tanks are pumped out and cleaned roughly once every year or two, but there are no records of the clean-outs.

Observation	**Photograph**
1. *View of the facility's wastewater treatment unit. Note the accumulation of metal plating process fluid in the treatment unit's secondary containment system. During the inspection, Mr. Rademaker explained that a pump on this system is only working at 50% capacity, which caused the accumulated plating waste to accumulate in the bermed area. EPA did not collect a sample of the liquid during the inspection.*	 No. 1 (IMGP3900)
2. *Additional view of the wastewater treatment unit.*	 No. 2 (IMGP3901)

Observation	**Photograph**
3. *Additional view of the wastewater treatment unit showing secondary containment being used to accumulate metal plating waste. Based off of Semiray's previous manifests, the plating / anodizing waste is likely D002 and/or D007 and F006.*	 No. 3 (IMGP3902)
4. *Filter press located inside the wastewater treatment unit bermed area. The filter press is situated on top of a concrete slab. Cracks were noted in the concrete berm approximately (see IMGP3907.) Note the accumulated filter cake (F006) residue within and beneath the unit.*	 No. 4 (IMGP3904)

Observation	**Photograph**
5. *Close up of accumulated filter cake waste (F006) within and below the filter press unit.*	 No. 5 (IMGP3906)
6. *View of the secondary containment berm surrounding the filter press and wastewater treatment unit. Note the crack, circled in red (approximately 2 mm) which runs through the berm. This crack is located along the facility's southernmost perimeter. Also note the accumulated filter cake residue on the surface and the deterioration and cracks in the surface coating.*	 No. 6 (IMGP3907)

Observation	**Photograph**
7. *View of the bermed wastewater treatment unit and filter press area. Photo was taken facing east. The location of the crack in the berm shown in IMGP3907 is circled in red on this photo.*	 No. 7 (IMGP3908)
8. *Super-Sack of F006 filter cake sludge accumulated located within the facility's wastewater treatment unit area. The Super-Sack was not labeled, dated or closed.*	 No. 8 (IMGP3909)

4. Facility

The following table summarizes the observations made during the walk-through portion of the facility's exterior grounds and metal plating / anodizing areas.

Observation	Photograph
1. *View of an inlet located immediately north of the facility's wastewater treatment unit and northwest of the HWAA (shown in the left of this photo). Mr. Rademaker was unsure if this drain discharged to a drywell or to a storm water conveyance system (MS4).*	 No. 1 (IMGP3856)
2. *Discharge from plating bath waste through a leaking pipe into the floor's drainage system. The plating bath drainage pipes shown in grey appear to be interconnected and inspectors were unable to discern which plating bath this liquid had discharged from.*	 No. 2 (IMGP3918)

Observation	Photograph
3. *Accumulated plating / anodizing bath liquid waste on the floor (circled in red). Note the evidence of previous staining.*	 No. 3 (IMGP3919)
4. *Accumulated plating / anodizing bath liquid waste located behind the plating bath units. The liquid could potentially carry the D002 and/or D007 and F006 waste codes, depending on the contents of the tanks.*	 No. 4 (IMGP3920)

Observation	Photograph
5. *Accumulated plating / anodizing bath liquid waste located in the facility's drainage gutters. Mr. Rademaker stated during the inspection that this the level of liquid in the drainages is average and that the drainages are cleaned approximately every 3 months.*	 No. 5 (IMGP3933)
6. *Plating / anodizing bath with an "OUT OF SERVICE" sign. In an 11/21/2014 email to Rick Sakow, Mr. Rademaker stated the tank was taken out of service for routine maintenance due to solid build up around the tank. The solids at the bottom of the tank are crystallization formed due to an acid etch operation that chemically removes calculated aluminum based on an etch rate requirement. When the tank is in process, it's a nitric / HF aluminum etch.*	 No. 6 (IMGP3937)

Observation	Photograph
7. *Accumulated liquids and crystallization solids located in the bath shown in IMGP3937.*	 No. 7 (IMGP3938)
8. *Accumulated metal plating or anodizing liquids draining into the facility's drainage system. Note the cracking on the surface (circled in red).*	 No. 8 (IMGP3944)

D. **Record Review**

Record	Year(s)	Observation(s)
Manifests	2010 - 2014.	EPA made copies of Semiray's manifests at the facility. The copies were difficult or impossible to read, and EPA requested copies of all manifests from 2010 – 2014 from Stericycle, Semiray's hazardous waste transporter.

Record	Year(s)	Observation(s)
Land Disposal Restriction ("LDR") Notifications	2010 - 2014.	EPA copied the LDR forms available during the 10/30/2014 inspection and also reviewed additional LDR forms submitted by Semiray in their 12/11/2014 response to EPA's information request. Semiray did not have certified LDRs within the last three years for their F006, D002, D007 and D033 wastes, all of which have been manifested within the last 3 years. The most recent LDR form for F006 was dated 4/28/2009. An unsigned and undated LDR form which included F006 was attached to manifest 00312942467 FLE, dated 2/21/2011. After the inspection, Semiray obtained LDR forms from Safety Kleen, dated 11/4/2014, for the following waste streams: D001, D018, D035, D039, D040, F003 and F005.
Biennial Report	*2010 - 2014.*	Semiray has not submitted Biennial Reports to EPA. Semiray provided copies of ADEQ Facility Registration and payment forms for years 2009, 2010 and 2012 in which they identified as Small Quantity Generators.
Contingency Plan (Business Plan)	Current	Semiray could not provide a Contingency Plan at the time of the 10/30/2014 inspection. In their 12/11/2014 response to EPA's information request, Semiray reported that they had adopted Kachina Technical Services and Process' Contingency Plan on May 20th, 2014. The Contingency Plan did not include names, addresses and phone numbers (office and home) of qualified emergency coordinator(s), as required by 40 CFR § 265.52(d).
Training Records and Documentation	*2010 - 2014.*	Training records could not be located at the facility during the inspection. In their 12/11/2014 response to EPA's information request, Semiray provided a list of employees who handle hazardous waste and their training history, as summarized below: **Employee** — **Last Hazardous Waste Training** Chris Rademaker, Lab Manager: 2/9/2010, 11/10/2010 Christian Durazo, Lab Technician: No training records Brian Pugh, Maintenance: No training records Don Ford, Chem Line Personnel: No training records Omar Vega, Painter: No training records Dennis Hawkins, Painter: No training records Bryan Ellis, Painter: No training records Damien Kisner, Painter: 2/9/2010

E. **Areas of Concern**

1. Inspectors noted that product materials are accumulated in the HWAA, reducing the area for adequate aisle spacing of hazardous waste containers.
2. Hazardous waste labels on the blue polyethylene 55-gallon containers were peeling off. Semiray should find a method to secure the stickers, such as applying a layer of primer on the containers, or switching to stickers which can adhere to polyethylene.
3. Markings on several of the hazardous waste container labels was illegible.

POTENTIAL VIOLATIONS of
Arizona Revised Statues (ARS) within Arizona Administrative Code (AAC) and RCRA 40 CFR Hazardous Waste Management Regulations

NO.	STATUTE OR REGULATION	REGULATION SUMMARY	FINDING(s)	FACILITY RESPONSE
1.	AAC R18-8-262.A and AAC R18-8-270.A [40 CFR § 262.34(b) 40 CFR 270.1(c)]	*Storage without a permit (storage beyond 90 days)* A generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided the generator comply with 40 CFR § 262.34 requirements.	1. Thirteen 55-gallon containers of chrome waste, (hazardous waste code F006) and flammable wastes (hazardous waste code D001) were accumulated facility longer than the allowable 90 day storage time. Numerous 55-gallon containers of chrome waste had been stored for 430 days beyond the allowable 90 day storage time in the HWAA, as described in further detail in Section 2. 2. The drainage sump within the HWAA had accumulated liquid of unknown contents at the time of the inspection. If analyzed and determined to be hazardous, this liquid would likely have been stored for longer than 90 days.	Following the inspection, Semiray manifested 7,050 lbs of hazardous waste on 11/21/2014. This manifest is included with Attachment 2.
2.	AAC R18-8-262.A and AAC R18-8-270.A [40 CFR § 262.34(a)(2) 40 CFR 270.1(c)]	*Storage without a permit (no accumulation start date)* Generators who accumulate hazardous waste at the point of generation on-site without a permit or grant of interim status shall comply with the following requirements: (1) The date upon which each period of accumulation begins shall be clearly marked and visible for inspection on each container and portable tank; (2) While being accumulated on-site, each container and tank is labeled or clearly marked with the words, “Hazardous Waste”.	1. Numerous boxes and bags of hazardous waste paint filters were accumulated without an accumulation start date or label in the HWAA. 2. One full one-ton Super-Sack of F006 filter cake was accumulated in the HWAA without an accumulation start date or label. 3. One partially full one-ton Super-Sack of F006 waste filter cake was accumulated in the wastewater treatment unit area without an accumulation start date or label. 4. A container labeled “Liquid Polymer” (unknown waste code) was accumulated in the HWAA without an accumulation start date or label. 5. Anodizing / plating wastes had accumulated in the secondary containment system of the wastewater treatment unit without an accumulation start date recorded.	Following the inspection, Semiray manifested 7,050 lbs of hazardous waste on 11/21/2014.

NO.	STATUTE OR REGULATION	REGULATION SUMMARY	FINDING(s)	FACILITY RESPONSE
3.	AAC R18-8-262 [40 CFR § 262.11]	*Hazardous waste determinations* A person who generates solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste.	1. The facility generated roughly 5-gallons of an unknown waste, accumulated in an unlabeled container in the HWAA, as described in Section 2, Observation 25 (IMGP3891). 2. The facility had filled a 55-gallon container with what appeared to be contaminated rags and personal protective equipment, accumulated in an unlabeled container accumulated in the HWAA, as described in Section 2, Observation 31 (IMGP3898). In their 12/11/2014 response to EPA's information request, Semiray reported that these waste used wipes are hazardous for methyl ethyl ketone, chromium, acetone, n-butyl acetate, toluene and xylene. This information was not labeled on the container. 3. An out of service tank used for Nitric / HF aluminum etch. had accumulated liquids and solids which were not handled as hazardous waste (D002?), as described in Section 4, Observation 7 (IMGP3898). 4. The drainage sump within the HWAA had accumulated liquid of unknown contents at the time of the inspection. The HWAA is covered by a roof, so it is unlikely that the large amounts of rainwater would have entered the building.	
4.	AAC R18-8-262.A and AAC R18-8-270.A [40 CFR § 270.1(c)]	*Satellite Containers* A generator may accumulate as much as 55-gallons of hazardous waste in containers at or near the point of generation. The containers must be marked with either the words "Hazardous Waste" or with words that identify the contents of the containers.	1. Satellite containers of D001 flammable waste in the anodizing and making area were not labeled with words "Hazardous Waste" or other identifying words. 2. A five-gallon bucket used to accumulate waste acetone (D001; F003) for titrations in the chemical laboratory was not labeled with the words "Hazardous Waste" or other identifying words.	
5.	AAC R18-8-262.A [40 CFR § 262.41]	*Biennial Report* Large Quantity Generators and facilities which treat, accumulate or dispose of hazardous waste on-site must submit a biennial report covering those wastes.	1. Semiray had not submitted a Biennial Report by March 1, 2014 for LQG quantity wastes generated in 2013. 2. Semiray had not submitted a Biennial Report by March 1, 2012 for LQG quantity wastes generated in 2011.	

NO.	STATUTE OR REGULATION	REGULATION SUMMARY	FINDING(s)	FACILITY RESPONSE
6.	AAC R18-8-265.A [40 CFR § 265.16(a)]	*Training (initial)* Facility personnel must successfully complete a program of classroom instruction or on-the-job training [for hazardous waste management and emergency response procedures] within 6 months of the date of their employment. Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.	1. In their 12/12/2014 response to EPA's Request for Information, Semiray identified 6 employees which handle hazardous waste and had never received hazardous waste training. Semiray identified and 2 employees which handle hazardous waste that had received their last refresher training in February 2010. 2. Annual refresher training was not conducted. Semiray did not have a training plan. Training records were not retained on site or available for review.	
7.	AAC R18-8-265.A [40 CFR § 265.16(c)]	*Training (refresher)* Facility personnel must take part in an annual review of the initial training.	In their 12/11/2014 response to EPA's information request, Semiray identified 8 employees who handle hazardous waste who had not received refresher training.	

NO.	STATUTE OR REGULATION	REGULATION SUMMARY	FINDING(s)	FACILITY RESPONSE
8.	AAC R18-8-264.A [40 CFR § 265.16(d)]	*Training Plan* Large Quantity Generator facilities must maintain a training plan which includes: a) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job, b) A written description for each position listed above, including required qualifications to fulfill the position, c) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position, d) Records that document the required training or job experience.	Semiray did not have a Training Plan for hazardous waste management at the time of the inspection.	
9.	AAC R18-8-265 [40 CFR § 265.31]	*Maintain Facility* Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.	1. The secondary containment structure of the wastewater treatment unit showed evidence of degradation. The sealant was deteriorated or non-existent. Semiray could not determine when the surface was last sealed to prevent seepage. 2. The concrete secondary containment berm showed numerous cracks. One of the cracks in the secondary containment structure split completely through the concrete on the southern boundary of the facility (see photo IMGP3907.) 3. Filter cake residue was accumulated beneath the filter press and in surrounding areas, indicating that spills are not routinely cleaned. 4. Metal plating waste had accumulated in floor drains throughout the facility. Extensive staining from plating bath wastes on the surfaces was noted throughout the facility. Mr.	

NO.	STATUTE OR REGULATION	REGULATION SUMMARY	FINDING(s)	FACILITY RESPONSE
			Rademaker stated during the inspection that the floor drains are cleaned approximately once every three months. 5. Numerous garbage bags of air filters were not stored in adequate containers to prevent the release of hazardous waste to the environment or to protect worker safety (see IMGP3896). The air filters were hazardous for methyl ethyl ketone (D035, F005), chromium (D007), acetone (F003), n-butyl acetate, toluene (F005) and xylene (F003).	
10.	AAC R18-8-262.A and AAC R18-8-265.A	*Closed Containers* A container holding hazardous waste shall always be closed during storage, except when it is necessary to add or remove waste.	1. Two open boxes and approximately 8 garbage bags of hazardous waste paint filters were accumulated in the HWAA without being properly closed. 2. One full one-ton Super-Sack of filter cake was accumulated in an open container in the HWAA. 3. One partially full one-ton Super-Sack of filter cake was accumulated in in an open container the wastewater treatment unit area. 4. Hazardous waste container in the HWAA had a funnel which was not latched shut and did not have adequate gaskets to prevent releases of solvent fumes.	
11.	AAC R18-8-265.A [40 CFR § 265.35]	*Aisle Space* A generator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment.	Several containers in the HWAA were inaccessible for inspection due to crowding, as described in Section 2, Observation 13 (IMGP3874).	
12.	AAC R18-8-265.A [40 CFR § 265.52]	*Contingency Plan* Operators must have a contingency plan designed to minimize hazardous to human health or the environment form fires, explosions, or any unplanned sudden or non-sudden release of	Semiray adopted Kachina Technical Services and Process' Contingency Plan on May 20th, 2014. The Contingency Plan did not include names, addresses and phone numbers (office and home) of qualified emergency coordinator(s).	

NO.	STATUTE OR REGULATION	REGULATION SUMMARY	FINDING(s)	FACILITY RESPONSE
		hazardous wastes.		

List of Attachments

1. Inspection photos and photograph log
2. Semiray's hazardous waste manifests from 2011 – 2014
3. RCRAinfo Site Detail Report for Semiray
4. Semiray facility site map
5. ADEQ Inspection Reports (2/1/2010 and 4/19/2011) and NOVs (4/26/2010 and 6/22/2011)